



Open House Day Attractions Are Numerous, Exciting

by Peter Cobun

The doors to an out-of-this-world experience will open to the public on Saturday, May 3, at the Marshall Center.

A free, rare look inside one of NASA's pioneering space centers is on tap during its first full Open House in more than 30 years: a look at the United States' future in space and the Marshall Center's role in it, as well as today's NASA missions, and Marshall's storied, successful past.

You can meet members of NASA's astronaut corps, who will be on hand to greet Marshall Center visitors.

Every half hour between 9 a.m. and 4 p.m., you can feel the ground rumbling and see billowing smoke at live test firings at the Hot Gas Facility, designed to test the solid rocket boosters and motors that put America in space and the record books.

Witness a live demonstration of a blast of wind at five times the speed of sound — the kind of rigorous tests conducted for decades at Marshall's Trisonic Wind Tunnel to help perfect today's and tomorrow's launch vehicles. Demonstrations are set every half hour.

Get a close-up look at the 40-foot-high, 1.3-million-gallon Neutral Buoyancy Simulator, used to simulate the near-zero gravity of space. In the tank's deep water, astronauts, engineers

and designers wearing space suits have prepared for space flights since the early days of the space program through the latest Hubble Space Telescope repair and upgrade mission.

Enter the research world of Space Sciences — laboratories where scientists unlock the secrets of the universe through X-ray astronomy, cryogenics, holography and crystallography, to name but a few fields. Laboratory personnel will explain how scientists use the unique environment of space to perform experiments that can't be done anywhere else. Visitors will see the new supermaterial, "Aerogel." Sometimes called "frozen smoke," it's the lightest solid material known — only three times the density of air — and has tremendous insulating capabilities. You'll learn how storms affect our everyday lives, and how you can monitor them at home or in the classroom. And find out how water, ice and water vapor determine the Earth's weather and climate.

Take a look at the world's flattest floor, where remote-controlled robots are tested for space missions.

See where astronauts train for research missions aboard the Space Shuttle. Peer into the Spacelab Mission Operations Control Center, where science missions aboard the Space

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California, Louisiana Schools Win Fourth Moon Buggy Race



Students from the University of California-Santa Barbara pilot their winning vehicle around demanding "lunar course" at the Moon Buggy Race on Saturday.

by Deana Nunley

A team of students from the University of California at Santa Barbara emerged victorious Saturday in the Fourth Annual Great Moon Buggy Race. Their prize is a trip to Kennedy Space Center in Florida to watch a Space Shuttle launch.

In the high school division, Monterey High School in Monterey, La., finished first. Their prize is a weekend at Space Camp at the U.S. Space & Rocket Center.

Teams representing 16 colleges and high schools pitted their engineering skills against students from across the United States. Each team designed, built and

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Inside...

Secretaries Day Profile

Beth Guthrie Shares Her Story, Ideas on Secretaries Day

Editor's Note: The job of secretary has long been recognized as one of the most vital in keeping government and business offices running smoothly. In recognition of that importance, Professional Secretaries Day is observed each year in April. This year, the observance is today. The services provided by secretaries have markedly changed over the years, and the evolution of the job is continuing. For a unique perspective on the job and what it entails in the late '90s, the **Marshall Star** interviewed Beth Guthrie, secretary to Center Director Dr. Wayne Littles.

Marshall Star: How long have you been a secretary? How many "steps on the ladder" have there been to your current job?

Guthrie: When I was a child, I always wanted to play "office" instead of "school" or cowgirls and Indians. I attended a business college in Florence, taking a secretarial science course. In February 1963, I accepted a job at Monsanto and in May was offered a job in the Research Projects

Laboratory (now Space Sciences), which I accepted. I went to work in the Office of the Lab Director, Dr. Ernst Stuhlinger. I worked in Research Projects until 1966 when I quit to have a baby. Eight years and two children later, after having worked a couple of temporary appointments in Research Projects, doing volunteer work, substitute teaching, and filling in for various vacationing secretaries in town, I decided to return to work. I began again in the Shuttle Projects Office, working in various positions until I went to work for the deputy director. I worked there until 1982 when I

transferred to the Marshall Resident Office at Kennedy Space Center and later to the Office of Inspector General at Kennedy. I returned to Marshall in 1986, working for the Executive Staff, for Woody Bethay, and for Dr. Littles as deputy director. When Dr. Littles was assigned to NASA Headquarters, I transferred to Management Operations, Transportation Division. I dealt with Marshall travelers and assisted the Transportation Office in shipping and receiving. When it was announced in that Dr. Littles was returning to Marshall as Center Director in February 1996, I applied for the position and was fortunate enough to be chosen.

Marshall Star: What about long-term goals and visions? For instance, when you were in the early part of your career, did you have your sights on something like being secretary to the Marshall Center director?

Guthrie: When I first started my career, I had no long-term goals. Most of my generation planned to work for a while and then stay home as a housewife and mother, maybe returning to the workforce when the children were out of college. Even when circumstances dictated that I return to work while my children were still small, I didn't plan to "work all my life." I never really thought that I'd ever have the opportunity to advance as far as I have. I feel that I've just been in the right place at the right time.

Marshall Star: What is a typical day like for you?

Guthrie: A typical day is normally filled with answering telephone calls and erasing on the calendar. For every meeting I write on the calendar, I probably erase it anywhere from two to four times and move it to another place on the calendar. A typical day is being here and ready to go to work by 7 a.m., going over what I should expect for the day. Many days the phone rings constantly. Calls range from people wanting to know who the first director of Marshall was to Administrator Goldin or Congressman Cramer calling. We often get calls requesting Dr. Littles to speak or present awards. Getting Dr.

Littles to his meetings on time takes up a large portion of the day. When Dr. Littles is not here, besides continuing to answer the phone, I spend the day filing and taking care of general office work. Greeting a variety of visitors is a daily task. Oftentimes people wander in unexpectedly.

Marshall Star: What is most challenging and demanding about this job?

Guthrie: Remembering that everyone calling on the phone or calling in

person is our customer. I need to make sure that they leave this office with a feeling that they were treated well by the Marshall Center Director's Office. Doing this job requires a tremendous amount of time management.

Marshall Star: What is most rewarding?

Guthrie: The most rewarding aspect of the job is meeting all the people and feeling that I have done the best job that I can for Dr. Littles. I have met some wonderful people over the years here at Marshall, from the janitorial staff to the people I forward the telephones to when I'm ready to leave.

Marshall Star: After a long, hectic day, do you have any suggestions about how to unwind?

Guthrie: The best thing to do is to totally "data dump" if you can. I listen to the jazz and blues radio station or public radio during my drive home after I leave here. I enjoy spending time with my grandchildren, reading, doing needlework and yardwork. I take an antique class once a week. I have found that during my antique class, the only space I think about is the space to put an antique piece that I'm interested in. The key is to find something enjoyable and relaxing.

Marshall Star: With many organizations downsizing and with trends such as supplementing secretarial services with answering systems, what does it mean in terms of how secretaries do their job today?

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Beth Guthrie, secretary to Center Director Wayne Littles

Photo by Emmett Given

Moon Buggy Contestants, Volunteers Give Race High Marks

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raced its version of the “moon buggy.” The half-mile-long track at the Space & Rocket Center simulated the lunar surface, with “lava ridges,” “craters” and sandpits.

This year’s moon buggy race was sponsored by the Marshall Center — where the Lunar Roving Vehicle and the Saturn V that boosted it to the Moon were designed and developed. The moon buggy helped astronauts explore their landing sites on the Moon during the Apollo 15, 16 and 17 missions.

“Regardless of where they placed, competitors in the race came out of it with a better understanding and appreciation for the challenges that must be overcome in the space program,” said Marshall’s Jim Dowdy, moon buggy race coordinator.

Student participants in the event concurred in that assessment. As the University of Tennessee’s Laura Ziegler put it, “The best part was taking something from nothing on a piece of paper to something you drive on the course — it’s incredible.”

“You learn it in the classroom and then you get to apply it,” said Stephanie Haftl, College of New Jersey. “The moon buggy race is definitely the best learning experience for me.”



Above, University of Tennessee-Knoxville team's buggy was second place race finisher among college entries. At right, in the high school division, the winning team and best design prizes went to a team from Monterey High School in Monterey, La.

Each two-member team raced their human-powered buggy, piloted by one male and one female student. The winning time posted by the University of California at Santa Barbara team was 6 minutes, 56 seconds. The winning time for Monterey High School was 10 minutes, 39 seconds.

In the college division, the University of Tennessee-Knoxville and the University of Puerto Rico in Humacao placed second and third, respectively. A prize was also awarded to the Santa Barbara team, whose buggy was judged the “best” design from an original, creative concept and offering the best technical solution to navigating on a planetary surface. In the high school division, the “best” design award went to Monterey High School.

Effort donated by a large contingent of volunteers from Marshall and recruited by other sponsoring organizations was a critical element in putting on the event. Comments of volunteers indicate they gave, but also received as well.

“I worked with a judge on one of the obstacles. I got to repair the gravel after each entry came through the obstacle course. It was just great, I loved it,” said Joel Best of Marshall’s Mission Operations Laboratory. “It was such a good way to get high school and college students interested in the mechanical and engineering principles of space.”

Susan Smith, Marshall Center associate director, agreed. “It was just fantastic. You couldn’t help but get fired up just talking with the students who were participating. There were so many dramas going on between the teams. Arizona State had broken a tie-rod in their first heat and didn’t have a spare, so North Dakota State provided a spare for them. The enthusiasm is very contagious and I’ve already volunteered for next year’s race.”

Sponsors of the event with Marshall included the American Institute of Aeronautics and Astronautics, the U.S. Space & Rocket Center and the Alabama Aerospace Teachers Association.





Rocketdyne Among Low Award Winners

Rocketdyne Division, North American Boeing, Inc., Canoga Park, Calif., was chosen to receive the 1997 George M. Low Award from NASA Administrator Daniel S. Goldin in the large business, product category.

Presented last Friday at the Twelfth Annual NASA Continual Improvement and Reinvention Conference on Quality Management in Alexandria, Va., Rocketdyne and three other companies received NASA's highest quality and excellence award for contractors and subcontractors.

Other recipients are:

In the small business, product category: Dynamic Engineering, Inc., Newport News, Va.

In the small business, service category: Hummer Associates, Cleveland, Ohio and Scientific & Commercial Systems Corporation, Moffett Field, Calif.

"These organizations have demonstrated an exceptional level of quality and technical performance, benefiting both NASA and the nation," said Fred Gregory, NASA Associate Administrator for Safety and Mission Assurance and member of the George M. Low Award panel of judges.

Rocketdyne, builder of the Space Shuttle main engines, was cited for making exceptional organizational quality changes and has demonstrated measurable improvements, including reduced Space Shuttle main engine-related delays. Dynamic Engineering, developer and manufacturer of one-of-a-kind products, was chosen for its strong, entrepreneurial leadership which has improved customer satisfaction at the Marshall Center and Langley Research Center.

While the conference featured Goldin reporting on NASA's highest priorities, it also serves as a forum to share best practices and lessons learned from quality management initiatives.



Photos by Dennis Keim

At top, the team from Arizona State-Tempe had problems with their buggy during races, but it was judged runner-up for "best design." In the middle, Madison's Bob Jones High School team negotiates course with their vehicle, judged second best in the high school design competition. At bottom, Autauga County Vocational School's team works on their moon buggy, which finished second in high school division race standings.



Center Opens Doors May 3

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Shuttle are managed. It was here that "Huntsville" joined "Houston" as a call sign from space.

And glimpse the future: See where science missions aboard the International Space Station will be controlled.

Get a peek at the actual International Space Station — the permanent space laboratory — being assembled at Marshall in the largest international scientific and technological endeavor ever undertaken.

Look inside a test facility for hardware that will make safe drinking water aboard the Space Station from astronauts' shower water, clothes wash water, perspiration and even urine.

View exhibits, renderings and models of NASA's most advanced space transportation and propulsion concepts, designed to move beyond the Space Shuttle, beyond the next-generation Reusable Launch Vehicle, to provide access to space at dramatically reduced costs.

Also during the day, drop by the TV studio for live demonstrations of how a NASA mission television production center works. For a special treat, children will be "suspended" in

"This Open House is designed by Marshall employees to show our appreciation to the public for many years of support." — Cedreck Davis

an outer space scene as technicians snap their photo. Visiting children will take home a free, 5-by-7-inch souvenir color print of themselves from "space" to show their friends.

There'll be other giveaways, too: a 16-page, souvenir brochure of the Marshall Center, with a cover that becomes a handsome wall poster; balloons; a full-color Space Shuttle poster — with its artist on hand to autograph his work; and special commemorative coins.

Other souvenirs will be available for purchase at locations around the Center, throughout the day of the Open House.

Food and refreshments also can be purchased. And there'll be ample quantities of it: more than 2 tons of hot dogs, 1,750 pounds of potato chips and pretzels and nearly 3,500 gallons of soft drinks — or 22,000 bottles.

You can experience all this — and much more — at your own, flexible pace. Build your own tour by walking or driving from location to location, where "you'll find friendly Center representatives on hand to provide information and answer questions," said Cedreck Davis, Marshall's Open House chairman.

Visitors can enter Redstone Arsenal for the Marshall Open House through two gates on May 3: Gate 1, from Martin Road at the South Memorial Parkway interchange; and Gate 9, at the Rideout Road exit of Interstate 565.

Flyers containing a vehicle placard will be available the day of the Open House at the Arsenal gates. They also are available now at local libraries, area colleges and universities and at the U.S. Space & Rocket Center.

For further information, contact May Wales at 544-5552.



Propulsion Laboratory Director Sid Saucier (far right) presents the lab's "Employee of the Year" Award to Tim Sanders (third from left). Runners-up are Mike Martin (left), Robert Champion and Rae Ann Weir (not shown).

Professional Secretaries Day

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Guthrie: With all the office automation available today, one would think that the role of the secretary is an easier one. It's like my grandmother used to say... she had an automatic machine to do her clothes, an automatic machine to do her dishes and an automatic machine to do her floors, however, she still didn't have anymore time than she did when she used a scrub board, washed dishes in the sink and swept with a broom! With the downsizing, it has gotten worse because there aren't many secretaries coming up through the ranks or into the system. After this group of secretaries is no longer in the workforce, who's going to schedule calendars or answer phones? I think secretaries today are as important as secretaries were when I first started in 1963. There are times when automated answering systems are needed, they do have their place in a workforce such as this one, but people still enjoy talking to a real person and feeling comfortable knowing that they can get answers.

Marshall Star: Do you see other ways in which the role of the secretary has changed during the time you've been in this field? If so, how?

Guthrie: The secretarial role has definitely changed. We now have more responsibility, and supervisors involve the secretary more. Secretaries today do more than secretarial work. Although we're still paid on the secretarial scale, we are professionals.

Marshall Star: Having gotten to this position, can you share your philosophy with others here at Marshall about how to do the job when things get really hectic or challenging?

Guthrie: Keep your sense of humor! Remember that people on the other end of the telephone or who have just entered the office have no idea about what you have been through up to that point. You may have four other lines on hold, and several people lined up at your desk waiting to talk to you. Concentrate only on the item that you are working with at that time. It's very hard in this position to start a task and actually complete it with out being interrupted.

Employee Ads

Miscellaneous

- ★ Fender Stratocaster Ultra \$750, Soloflex with butterfly and leg attachments \$550. 350-7461
- ★ Nordic Track Ski exercising machine \$350. 533-1006
- ★ Sears mower, 4 HP, self propelled, grass catcher \$75. 534-8186
- ★ 19" color TV (Ward's) no cable hookup \$45. 881-5269
- ★ Infant bouncy activity seat \$18. 837-5113
- ★ Women's bicycle, 10 speed, upright handlebars, soft seat, 26" wheels. Call after 7 p.m. \$55. 881-6706
- ★ Heavy oak and tile coffee table, 52Lx28Wx21H \$125 firm. 883-2948
- ★ Bedliner from 91 Chev. 1500, short w/b, slight damage \$35. 881-6572
- ★ Two NASCAR craftsman truck series tickets in Nashville; August 16th; face value \$39 ea. 461-7434
- ★ Outdoor wooden gym set \$100. Call after 6 p.m. 882-2323
- ★ Beanie Babies for sale! \$10-15. 539-7834
- ★ Membership at Little Mountain Resort on Lake Guntersville. Cabins, camping, fishing, boating, swimming etc. 881-0645
- ★ Aerobic Rider 2 by Health Rider \$60. 890-0297
- ★ Remington 870, Mossberg 500, cabinet, Honda trail bike, Super Nintendo, Previa bra and Whistler radar detector. 881-5411
- ★ First boat 16' with 105 HP includes trailer skis and all needed equipment. 837-9814
- ★ Bose Acoustimass AM-5II speakers \$450; Kenwood KR-5040, 80WPC stereo receiver with remote \$140. 350-7461
- ★ B&D grass shears, rechargeable \$10. 881-5269

Vehicles

- ★ 1995 Thunderbird LX, V8, full power, 34K miles \$12,250. 350-7461
- ★ 1989 Mercedes-Benz 260E, silver, 4-door, serviced regularly \$10,500 o.b.o. 533-0955
- ★ 1990 Plymouth Acclaim, 81K miles, A/C, P.B., P.S., P.W., P.D.L., CC, radio, tape \$4,700. 883-2717
- ★ 1990 Buick Riviera, ruby red, AM/FM, cassette, CD player, 79K miles \$6,900. 881-2601
- ★ 1979 Caprice Landau, original owner, 2 door, 305, V8 \$1,200. 881-1249
- ★ 1994 Honda CBRF2, 4,666 miles, chrome pipe, alarm remote starter, seat, cowl/bra, & helmets \$4,500. 309-0461

- ★ 1987 Ford Aerostar, 7 passenger retail \$4,725; wholesale \$3,500; asking \$3,400. 586-3061
- ★ 1988 Accord LX, automatic, power locks/windows, \$3,850; 1992 Taurus GL, automatic in console, power locks/windows, ABS, 2 air bags, \$7,400. 880-9025

Lost

- ★ Lost: black softball glove at Marshall's softball field. 922-0958

Wanted

- ★ Old Guitars, mandolins, violins and banjos. 883-6969
- ★ Men or youth's used Trek mountain bike. 883-6821
- ★ Rototiller, rear tine preferred. 722-0095 (Huntsville), 350-0682 (Decatur)

Center Announcements

- ☛ **MOO**—The Management Operations Office retirees will hold their monthly meeting for breakfast/lunch on April 24 at the Cracker Barrel in Madison at 10 a.m. All present or former MOO employees are welcome. If there are any questions call 539-0042
- ☛ **MMA**—The Marshall Management Association is conducting a midyear membership drive until May 9. Membership in this organization for the rest of the year can be obtained with a \$15 fee. Meetings are held every quarter and the program generally consists of a social hour, dinner and a presentation given by a guest speaker. Interested individuals may forward their payment to John Cather/GP50.
- ☛ **MARS**—The MARS Golf Tournament is scheduled for May 3 at Plantation Point. The format for the tournament will be two-man best ball. Deadline for entries is 12 noon on April 25. Entry fee is \$4 and green fees will be paid at the course. Open to all MSFC employees or retirees. Entry contacts are L. Foster (4-1589), J. Butler (4-3808), J. Loose (4-2422) and R. Harwell (4-2684). For more information call S. Tillery at 4-8651.
- ☛ **Third Annual Bookfair**—The NASA Exchange-sponsored Bookfair will be held April 22-24, from 8 a.m. - 4 p.m. in Bldg. 4200, Rm. G13. Available for purchase at substantial savings, selections will include best sellers; sports and children's books; and books on cooking and decorating. For more information contact Carol Wasserman at 4-7564.

- ☛ **Locker Contents**—The NASA Exchange is holding the contents from several lockers which were cleaned out in December 1996. These items can be picked up Monday through Friday from 7 a.m. to 4:30 p.m. Any items not claimed by April 24 will be discarded. If you have any questions please call 544-3337.
- ☛ **Toastmaster**—Redstone Toastmasters International will meet every Tuesday at 6 p.m. in the Morrison's Cafeteria in Madison Square Mall. For more information call 461-0476
- ☛ **NASA Exchange**—Marshall has entered an agreement with Executive Tour & Travel Services, Inc. to offer selected vacation packages to employees, retirees and on-site contractors. A deposit of \$155 by May 30 is required for this exclusive offer, but travel dates are good through May 1998. For more information see "Inside Marshall, Employee Information, NASA Exchange" or call 1-800-272-4707. The NASA Exchange Account reference is ER11583.
- ☛ **CTAPC**—The Career Transition Assistant Program Center will offer two career development seminars April 24 for Marshall employees, retirees, co-ops and interns. Intensive Networking will be held 8-10 a.m. and Career Decision making will be held 9 a.m.-12 noon. The Center is also sponsoring individual counseling sessions on how to start a new business. Appointments are required. Seminars and counseling sessions will be held in Bldg. 4723. Contact: CTAPC, 4-2400.

Thank You

- ☛ **Ben Holland**—I would like to express my deep appreciation to all the MSFC employees who have so generously donated their annual leave to me in my struggle with cancer.

Job Opportunities

CPP 97-17-CP, Supervisory, Systems Accountant, GS/GM-510-15, Ofc. of Chief Financial Officer, Systems and Processes Ofc. Closes April 29.

CPP 97-22-JB, AST, Project Management, GS-801-15, Shuttle Projects Ofc., Space Shuttle Main Engine Ofc., West Palm Resident Ofc. Close April 28.

Reassignment Bulletin 97-8-CL (2 vacancies), AST, Experimental Facilities Dev., GS-801-13, Facilities Ofc., Planning and Integration Div. and Engineering Div. Closes April 28.

Reassignment Bulletin 97-11-CP Computer Assistant, GS-335-7, Spaces Sciences Laboratory, Office of the Director. May 1.

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